

(A) Relevance to claim

The following is a translation of passages related to claim 4 of the present invention.

(B) Translation of the relevant passages

[EMBODIMENTS]

[0007]

In this invention, the correction lens means 30 is positioned on the side opposite to the objective lens of an optical disk player with respect to the optical disk from which information is currently being read. The correction lens means 30 has a plurality of lens elements, and there is a space having a variable distance between opposing faces of each of consecutive pairs of elements. In the case of the Figure, the correction lens means 30 has only two elements in which the first lens element 31 has its first face 31a facing the objective lens means 11 and its second face 31b being placed apart from the first face 32a of the second lens element 32. A gap 34 between the rear face 31b of the first lens and the front face 32a of the second lens is freely adjustable so as to allow correction with respect to the range of the thickness D



of the substrate. Here, one of the correction lenses is secured in a fixed manner, and the other lens is attached in a manner so as to be adjusted by being moved toward the fixed lens or apart therefrom in directions of arrows M. The objective lens means 11 is allowed to move in a separate manner so as to maintain a focused state onto the disk, and the correction lens means 30 is separated from the objective lens means 11, and independent therefrom. Any means 35 may be provided so as to position the correction lens composite member 30 at a place with a variable distance in a wider movable range of distance from the objective lens means 11 or at a place with a selected distance therefrom, or another mechanism 35' may be installed so as to position the correction lens means 30 at a place with a variable distance in a wider movable range of distance from a supporting mechanism for the disk 14 (not shown) or at a place with a selected distance therefrom. Then, the means 35 or 35' maintains the correction lens means at the position having the selected distance. For this reason, even if the distance between the means 11 and the means 30 varies within a certain range, no problem is virtually raised.

[0008]

The correction lens element 31 on the front side is secured to the housing means 36' in a fixed manner at a position having a nominal distance (for example,



1.00 mm) selected from a point 24 on a certain axis; in contrast, the second correction lens element 32 is attached to separate housing means 36. This housing means is allowed to shift in directions of arrows M in a manner so as to approach the first correction lens element 31 or to depart therefrom by functions of an appropriate mechanical means 37 (which may include, for example, a rack element 38 and a freely rotatable pinion element 39). In response to thickness data supplied from the data reading means 42 which can directly find data of the lens-to-lens corrected distance L from the data means 44 on the surface 18a of the optical disk, this mechanical means shifts the means under control of means 40 which converts the thickness data to the separation distance and also carries out a driving operation.









(5)

D. その厚さ  
31, 32 補正レンズ

37 機械的な手段  
42 データ読取手段

【図1】



